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MULTI-YEAR HUMAN RESOURCE PLAN MINERAL SCIENCES LABORATORIES (MSL) 1992

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MINERAL SCIENCES LABORATORIES
DIVISION REPORT MSL 92-32 (IR)

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Multi-Year Human Resource Plan

Mineral Sciences Laboratories (MSL) 1992

1. Overview:

a) **Operations:**

Four key program areas have been established in the Business Plan 1992-1995 under which research will be undertaken in the Mineral Sciences Laboratories:

- Environmental Protection;
- Resource Conservation;
- Industrial Competitiveness; and
- Advanced Technologies.

These program areas are supported by some 11 Core Research Projects whereby MSL can sustain long term scientific and technological capabilities and address specific longer term needs of industry and government. Support for these core projects will amount to an investment of about one-third of MSL resources.

Client oriented work comprises two-thirds of the MSL activity and demands close collaboration through enhanced business practices, close project management and delivery of quality products. Projects are conceived, developed, executed and delivered to meet objectives defined in close collaboration with industrial and government clients. The cost of such projects is shared by the clients from full recovery by MSL in the case of site specific, client specific work to jointly funded with each party paying its own costs.

The Business Plan also identifies the strategic thrusts of MSL as:

- Mine/mill effluent quality;
- Process control; and
- Recycle.

These thrusts will influence new initiatives within MSL in the planning period.

b) **Human Resource Planning:**

The Business Plan 1992-1995 represents significant change from the normal structure of the laboratories in previous years.

Changes in MSL have placed significant demands on the staff of the Division. Demands for a market orientation, project structure, interdisciplinary team approach and more individual responsibility necessitate skills renewal and upgrading on an individual basis. These needs are being met through individual and collective training, team building, reassignment and enhanced communications. Several young professionals are being supported in graduate studies at Canadian universities. Language training and the increasing use of French in the workplace allows MSL to better serve the needs of both employees and clients.

The organizational objectives of equitable representation of all Canadians is supported. With a continuing erosion of the personnel complement of MSL, opportunities for engaging new staff are constrained. The programs for young scientist recruitment and hiring underrepresented groups are being used extensively.

The potential for strengthening project teams through contributions from clients and consortia presents a major opportunity to engage new staff. This flexibility will offset many staffing concerns and enable more timely and effective delivery of projects to clients.

c) **Living the Mission:**

MSL has recognized the common benefits to employees and clients of living the Mission. The greater involvement of all employees in the operations of the Division is seen as an imperative in achieving new levels of performance and excellence. MSL continues to monitor progress on Departmental, Sectoral and Divisional action plans and has made its own Mission Action Plan a significant element of Managerial Accountability Accords.

MSL has undertaken to enhance communications in all directions through forums for project teams, disciplinary groups, laboratory staff and divisional briefings. MSL's organization facilitates more rapid and more frequent intercommunications.

Team building continues to grow based on divisional wide training and practice. Rewards and recognition for service are emphasized. Upward feedback on the performance of leaders and managers has been instituted. The appraisal process is being made more just, more effective and more clearly understood through training and practice.

2. Profile of Personnel:

The continued downsizing of MSL over more than a decade has not enabled the normal recruitment rate of younger personnel. This has placed a constraint on the ability of MSL to move rapidly into new areas of technological endeavours. Figure 1 provides the age distribution of both professional and support staff.

Scientific and technical personnel from MSL have limited mobility within the public service because of their high degree of specialization. Reassignment and retraining in specialized fields is difficult. Current policies make it difficult to move personnel out of less productive areas. As a result downsizing is largely achieved by attrition through retirement.

The changing demands on MSL operations give rise to a further complication. Client orientation results in shorter term, more pragmatic research projects. There is a significant shift away from longer term exploratory research toward more strategically designed projects. Furthermore, there is a client need for research results to be delivered in a more "user friendly" package such that results can be quickly applied. This change represents a shift toward technology. This demands a larger engineering component. The need for immediate application by clients also requires more fully developed techniques requiring more input in MSL by technologists. Currently, MSL has a ratio of nearly two professionals per technologist. Changing client demands may well require a one-to-one ratio, or even one-to-two ratio.

MSL is well represented by visible minorities particularly among professional staff. However, recruitment of francophone and female professionals continues to be difficult. In fact, recruitment of highly qualified professionals in general is demanding. The current staffing levels for underrepresented groups are presented in Figure 2.

3. Human Resources Issues:

The MSL MYHRP is characterized by three principal thrusts:

- focus;
- impowerment; and
- training.

i) Focus:

MSL is undergoing significant change. In fact, few see that the relative stability of the previous two decades will return. Continuing change will be a feature of MSL for the planning period.

With so much change, there is a danger that efforts will be dissipated by a myriad of conflicting and competing initiatives and activities. In such an environment it is critical that priorities be established and that efforts be focused on those priorities.

MSL has established the primary focus to be the client. The EMR Mission has established that "We serve Canada through the excellence of our people, knowledge and expertise". MSL can only serve its clients through its people. Therefore, MSL must focus on aligning the expertise, skills, abilities and efforts of its people toward meeting client needs.

This focus will require careful recruitment of new personnel to address the MSL thrusts and to shift the emphasis toward applications which require more technology and more engineering. Service must be provided to all regions of the country with equal efficiency and effectiveness.

ii) **Empowerment:**

The structure of MSL has changed very dramatically. The organizational diagram in Figure 3 is designed to provide flexibility and responsiveness to meet the changing client demands.

Service to the clients is provided through clearly defined responsibilities and accountabilities to meet objectives. The line laboratories are responsible for the performance of all scientific and technical work. The Office of Business Development is responsible for marketing, client liaison and project management.

Work in MSL is developed as a project with defined objectives, cost and outputs. This is guided by a project leader leading a team of colleagues to deliver the product. Program Principals provide guidance and advice on long-term capability and research quality.

Through the introduction of this structure people are more fully empowered to be responsible and accountable for their work. Team members more clearly understand their role and are in more personal control of their work objectives, their time management and use of materials and equipment.

Team members report as colleagues to the Project Leader. The Project Leader reports to the Laboratory Manager on progress, problems and delivery of the project.

Through this more decentralized and dispersed responsibility individuals are empowered to be in command of their own contributions to the overall objective. Lines of communication are shorter. Fewer levels of approval and audit make individual responsibility a key element of operations.

iii) **Training:**

The empowerment of the individual places more responsibility for individual capacity to deliver. Each individual must not only understand their role, but they must have the training to do the job as required.

In most cases, MSL scientific and technical people are well trained in their specialty, i.e., the mineral dressing technician has a solid foundation and experience in all aspects of his field. Technical training is required only when specific new techniques are required to meet client needs or to develop unique capability in new fields.

Training requirements rest very largely in acquiring the skills demanded by the changing working relationships and the empowerment of the individual. These training demands might best be broken down into interpersonal skills and operational skills. Interpersonal skills training is in the areas of communication, team building and self-realization. Operational needs centre on project management, management development, total quality management and long term planning.

4. Action Plans:

In order to meet the thrusts of the MSL MYHRP, the following action plans are set out with objectives and proposed undertaking.

Objectives	Proposed Action
i) Workforce Adjustment: Reduce the "A-base" staffing level to 151 plus PY's available through PERD, MDA's and other ancillary programs.	i) Use the mechanisms of early retirement to open up new opportunities for younger staff. Implement measures to achieve a more appropriate, professional/technician ratio. Ensure that staffing gives special attention to increase participation by underrepresented groups.
ii) Team Building: Develop a common understanding of the strength and usefulness of teams and to enhance awareness of the individual roles and responsibilities.	ii) Complete the program of teambuilding seminars to cover all MSL personnel. Build on this base to enhance team performance and reward excellence.

Objectives (cont'd)	**Proposed Action (cont'd)**
iii) Project Management: Provide the motivation and skills to deliver projects to meet client expectations.	iii) Complete training of all managers, program principals and project leaders in project management.
iv) Succession Planning: MSL has not developed a strong cadre of managers internally. Managers have been hired from outside of MSL.	iv) Develop and train a team of successors to the current MSL management team through identification, training and task assignment. Encourage more equity for all groups in the management cadre.
v) Total Quality Management: Better serve client needs through building quality into the planning, execution and delivery of all products.	v) Build TQM principals and systems into the functioning of MSL. Enhance the breadth of the current use of TQM practices through project teams, collaboration, training and recognition of quality in deliverables.
vi) Official Languages: Enhance the use of French in the workplace through meeting training objectives, increased Francophone staffing and more mechanisms using French, e.g., seminars.	vi) Review the linguistic profile of all positions and reaffirm the training schedules to meet objectives. Seek bilingual capability in new employees.
vii) Empowerment: Establish appropriate communications feedback and approval systems and initiate rewards to confirm empowerment.	vii) Use the existing systems of classification, evaluation and upward feedback to identify, encourage and enhance individual initiative. Reward appropriate actions and promote good practices.
viii) Underrepresentation: Meet departmental targets for staffing of underrepresented groups.	viii) Actively recruit, especially in the scientific and professional ranks, females, francophones and other underrepresented groups.

Figure 1.

MINERAL SCIENCES LABORATORIES - Year End Review

AGE PROFILE

Total MSL Staff

Age	March 1991 % of staff	March 1992 % of staff
20-24	1.8	2.4
25-29	9.7	6.1
30-34	10.9	8.5
35-39	9.7	12.8
40-44	15.8	11.6
45-49	15.8	22.0
50-54	12.7	12.2
55-59	16.9	12.2
>60	6.7	12.2
TOTAL	100	100

Figure 2.

MINERAL SCIENCES LABORATORIES - Year End Review

DISTRIBUTION of EMPLOYEES

(Indeterminate and terms at March 25, 1992)

Category	Employees	% Women	% Francophones	% Woman & Francophone
Management	1	0	0	0
Scientific & Professional	89	14	15	3
Administration	1	100	100	100
Technical	45	22	38	4
Operational	5	0	40	0
Administration Support	23	91	22	22
Total	164*	27	23	7

** Does not include employees on secondment from* MSL

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Figure 3.

CLIENT DRIVEN ORGANIZATION